



**CITY OF TUKWILA**  
**Public Works Department**  
**206-433-0179**

**DEVELOPMENT BULLETIN C5**  
**CROSS CONNECTION CONTROL**  
**(Backflow Prevention)**

***When is cross connection control required?***

The City requires cross connection control on domestic water supply for all buildings except single family residences, duplexes and four-plexes, on all fire lines, and on all irrigation lines. Every new or modified fire line or irrigation system shall incorporate a double check valve assembly backflow prevention device.

***Who can design cross connection control?***

Fire System

On new fire system design, the backflow prevention device plans must be stamped, signed, and dated by a Level III certificate of competency holder and by a professional engineer registered in Washington State.

On a retrofit fire line backflow prevention design, the plans must be stamped, signed, and dated by a Level III certificate of competency holder or by a professional engineer registered in Washington State.

Irrigation System

The City has no requirements for design, except that the device shall be a Department of Health approved double check valve.

For Domestic Water

The City has no requirements for design, except that the device shall be a Department of Health approved Reduced Pressure Principle Assembly.

***Who can install cross connection control?***

For Fire System

Backflow installation inside a building needs NO certification or registration. Backflow installation outside the building and underground requires the plans be stamped by the installer, who must have a Level III NICET certificate or a Level U contractor's certificate of competency.

If the installer is different from the designer, and then the installer must stamp, sign, and date the plans, in addition to the designer's stamp, signature and date.

For Irrigation

The City has no requirements for installation, except that the device shall be a Department of Health approved double check valve.

For Domestic Water

The City has no requirements for installation, except that the device shall be a Department of Health approved Reduced Pressure Principle Assembly.

## DEVELOPMENT BULLETIN C5

### CROSS CONNECTION CONTROL

#### *What is the cross connection control program?*

- For New Connections

For new connections, the Director requires the installation of backflow protection at the water meter before water service is provided. Any connection for commercial or industrial accounts shall be required to provide premises isolation. For premises isolation, install a Reduced Pressure Principle Assembly, previously called a Reduced Pressure Backflow Assembly, immediately downstream of the permanent water meter. Installation at another location requires the Director's approval.

- For Existing Connections

The Director evaluates the existing service connection per the following criteria:

1. If the project includes any alterations to the existing plumbing system, then the entire plumbing system must be brought up to the current standards as set forth in the Uniform Plumbing Code, including the installation of an approved Reduced Pressure Principle Assembly at the water meter.
2. If the project does not include any changes to the existing plumbing system, then such systems lawfully in existence at the time of installation may have their use, maintenance or repair continued if the use, maintenance, or repair is in accordance with the original design and location and no hazard to life, health, or property has been created by such plumbing system. The Department reviews high health cross-connection hazard premises as defined in WAC 246-290-490, Table 9, for premises isolation requiring either an Air Gap (AG) or Reduced Pressure Principle Assembly (RPPA).
3. If any previously unapproved backflow prevention device cannot be upgraded in the same location with an approved backflow prevention device (i.e. fire only systems upgraded from single check valves to double check valves), such limitations must be evaluated by the Director. If the new device is installed at a location downstream from the original device, all pipes must first be approved for potable water use prior to reconnection. The pipe material must be specifically rated for potable water use (no black iron), and the entire length of main to be converted must be thoroughly scoured using a multi-staged pigging process acceptable to the Director.

#### References

WAC  
RCW 18.160  
National Institute for Certification in Engineering Fundamentals  
Fire Facts Number 0015  
State Fire Marshall Larry Glenn  
USC List of Approved Backflow Prevention Assemblies

*This Bulletin should not be used as a substitute for codes and regulations. Your project will be reviewed for specific compliance to codes and regulations.*